

WHAT IS CLAIMED IS:

- 1 1. A low depth tray for bottles, comprising:
2 a first pair of opposed walls;
3 a second pair of opposed walls attached to the first pair of opposed
4 walls to form a wall structure;
5 a base attached to the wall structure;
6 a plurality of interior divider walls extending upwardly from the base;
7 and
8 at least one member projecting upwardly from an interior of the wall
9 structure and connected to the divider walls, the at least one interior member having
10 a height less than the height of the wall structure and less than the height of bottles
11 loaded in the tray;
12 wherein the at least one interior member, the base, the divider walls,
13 and the wall structure define a plurality of bottle retaining pockets which are each
14 sized to receive a single bottle therein.
- 1 2. The tray according to claim 1, wherein the wall structure includes
2 an upper wall portion having a plurality of upwardly projecting wall members.
- 1 3. The tray according to claim 2, wherein the upper wall portion
2 includes a plurality of windows formed therein between the wall members.
- 1 4. The tray according to claim 2, wherein the wall members and the
2 at least one interior member are substantially hollow.
- 1 5. The tray according to claim 2, wherein each wall member includes
2 at least one curved surface contoured to the shape of bottles loaded in the tray, and
3 wherein the at least one interior member is generally octagonal and includes curved
4 surfaces disposed on alternating sides thereof which are contoured to the shape of
5 bottles loaded in the tray.

1 6. The tray according to claim 5, wherein the wall members and the
2 at least one interior member each include an opening adjacent the base on the curved
3 surfaces thereof.

1 7. The tray according to claim 1, wherein the wall structure has a
2 double-walled construction and includes a lower wall portion having a substantially
3 flat outer wall and a generally curved inner wall.

1 8. The tray according to claim 2, wherein the plurality of wall
2 members includes side wall members disposed along the first pair of opposed walls
3 and four corner members disposed at the intersection of adjacent walls.

1 9. The tray according to claim 8, wherein the side wall members
2 each include a downwardly extending recess formed therein.

1 10. The tray according to claim 9, wherein the at least one interior
2 member includes a downwardly extending transverse recess substantially aligned
3 with the recesses in adjacent side wall members, and a downwardly extending
4 longitudinal recess extending along a longitudinal axis of the tray, wherein the depth
5 of the interior member recesses is substantially equal to the depth of the side wall
6 member recesses.

1 11. The tray according to claim 10, wherein the base has a lower
2 surface which includes a plurality of side wall member support ribs extending
3 upwardly from the lower surface to join with each side wall member recess, and a
4 plurality of column support ribs extending upwardly from the lower surface to join
5 with the transverse and longitudinal column recesses.

1 12. The tray according to claim 8, wherein each of the second pair
2 of opposed walls includes a handle structure, each handle structure including an
3 upper bar extending between adjacent corner members, a lower support member
4 connected to the corner members and the base, and a slot defined therebetween,
5 wherein a user's fingers can be inserted through the slot and under the upper bar in

6 a palm-up orientation, and over the upper bar and through the slot in palm-down
7 orientation.

1 13. The tray according to claim 12, wherein the upper bar and the
2 corner members are substantially equal in height, and the upper bar is outwardly
3 offset from the corner members.

1 14. The tray according to claim 12, wherein the lower support
2 member includes a generally horizontal portion which is connected to the corner
3 members and extends inwardly into the tray, and a generally vertical portion which
4 extends downwardly from the horizontal portion to join with the base.

1 15. The tray according to claim 14, wherein the horizontal portion
2 includes curved surfaces which are contoured to the shape of bottles loaded in the
3 tray and form part of bottle retaining pockets located adjacent the second pair of
4 opposed walls.

1 16. The tray according to claim 1, wherein the base includes an
2 upper surface including a plurality of spaced bottle support areas joined to the first
3 pair of opposed walls, wherein each bottle support area is generally circular and
4 forms part of one bottle retaining pocket.

1 17. The tray according to claim 16, wherein the bottle support areas
2 include apertures formed therein.

1 18. The tray according to claim 1, wherein the base includes a lower
2 surface having upwardly recessed closure receiving areas configured to receive and
3 retain bottle closures of a lower like tray therein.

1 19. The tray according to claim 1, wherein the bottle retaining
2 pockets are sized to receive two-liter bottles.

1 20. A low depth tray for storing and transporting bottles,
 2 comprising:
 3 a base;
 4 a unitary wall structure extending upwardly from the base, the wall
 5 structure having an upper wall portion including a plurality of windows formed
 6 therein and a plurality of upwardly projecting pylons disposed between the
 7 windows; and
 8 an interior support structure disposed within the wall structure and
 9 connected thereto, the interior support structure including a plurality of divider walls
 10 extending upwardly from the base and a plurality of spaced interior columns
 11 projecting upwardly from the base and interconnected by the divider walls, the
 12 interior columns having a height less than the height of the pylons and less than the
 13 height of bottles loaded in the tray;
 14 wherein the interior support structure, the wall structure, and the base
 15 together define a plurality of bottle retaining pockets, and the pylons and the interior
 16 columns each include at least one curved surface adapted to contact bottles received
 17 in the bottle retaining pockets.

1 21. The tray according to claim 20, wherein the pylons and columns
 2 are substantially hollow.

1 22. The tray according to claim 20, wherein outer faces of the pylons
 2 are tapered from bottom to top and are angled slightly toward the interior of the
 3 tray.

1 23. The tray according to claim 20, wherein the interior columns are
 2 generally octagonal and include curved surfaces disposed on alternating sides thereof
 3 which are contoured to the shape of bottles loaded in the tray.

1 24. The tray according to claim 20, wherein the wall structure has
 2 a double-walled construction and includes a lower wall portion having a

3 substantially flat outer wall and a generally curved inner wall which is adapted to
4 contact bottles received in the bottle retaining pockets.

1 25. The tray according to claim 20, wherein the wall structure
2 includes a pair of opposed side walls joined to a pair of opposed end walls, and the
3 plurality of pylons includes wall pylons disposed along the side walls and four
4 corner pylons disposed at the intersection of adjacent side walls and end walls.

1 26. The tray according to claim 20, wherein the wall pylons each
2 include a downwardly extending recess formed therein, and the interior columns
3 each include a downwardly extending transverse recess substantially aligned with
4 the recesses in adjacent wall pylons, and a downwardly extending longitudinal
5 recess extending along a longitudinal axis of the tray, wherein the depth of the
6 column recesses is substantially equal to the depth of the pylon recesses.

1 27. The tray according to claim 26, wherein the base has a lower
2 surface which includes a plurality of pylon support ribs extending upwardly from
3 the lower surface to join with each pylon recess, and a plurality of column support
4 ribs extending upwardly from the lower surface to join with the transverse and
5 longitudinal column recesses.

1 28. The tray according to claim 25, wherein each of the end walls
2 includes a handle structure, each handle structure including an upper bar extending
3 between adjacent corner pylons, a lower support member connected to the corner
4 pylons and the base, and a slot defined therebetween, wherein a user's fingers can
5 be inserted through the slot and under the upper bar in a palm-up orientation, and
6 over the upper bar and through the slot in palm-down orientation.

1 29. The tray according to claim 20, wherein the base includes an
2 upper surface including a plurality of spaced bottle support areas joined to the wall
3 structure and the divider walls, wherein each bottle support area is generally circular
4 and forms part of one bottle retaining pocket.

1 30. The tray according to claim 20, wherein the base includes a
2 lower surface having upwardly recessed closure receiving areas, the receiving areas
3 each having a downwardly extending, generally cloverleaf-shaped periphery
4 configured to receive and retain bottle closures therein.

1 31. The tray according to claim 20, wherein the bottle retaining
2 pockets are sized to receive two-liter bottles.

1 32. The tray according to claim 20, wherein the columns have a
2 height of approximately 75% of the height of the pylons.

1 33. The tray according to claim 20, wherein the pylons extend a
2 distance above the base of approximately 40% of the height of bottles loaded in the
3 tray.

1 34. A plastic low depth tray for bottles, comprising:
2 a base having an upper surface and a lower surface, the upper surface
3 including a plurality of spaced, generally circular bottle support areas;
4 a pair of opposed end walls extending upwardly from the base, each
5 end wall including a handle structure formed therein;

6 a pair of opposed side walls extending upwardly from the base and
7 integrally joined with the pair of opposed end walls, wherein the side and end walls
8 are of double-walled construction and include a lower wall portion and an upper
9 wall portion, the lower wall portion having a substantially flat outer wall and a
10 generally curved inner wall, and the upper wall portion having a plurality of
11 windows formed therein and a plurality of spaced pylons projecting upwardly from
12 the lower wall portion between the windows;

13 a plurality of spaced upwardly projecting interior columns disposed
14 along a longitudinal axis of the tray and having a height less than the height of the
15 pylons and less than the height of bottles loaded in the tray; and

16 a plurality of divider walls extending upwardly from the base and
17 interconnecting the pylons and interior columns,

18 wherein the base, side walls, end walls, interior columns, and divider
19 walls together define a plurality of bottle retaining pockets, each pocket including
20 one bottle support area for supporting a base of each bottle and at least one pylon,
21 column, and divider wall for providing lateral support for each bottle.

1 35. A stackable low depth tray for storing and transporting bottles,
2 comprising:
3 a base;
4 a pair of opposed end walls extending upwardly from the base;
5 a pair of opposed side walls extending upwardly from the base and
6 integrally joined with the pair of opposed end walls to form a wall structure, the side
7 walls including a plurality of spaced, upwardly extending hollow wall pylons, each
8 of the wall pylons having a downwardly extending recess formed therein which is
9 associated with a corresponding pylon support rib;
10 a plurality of spaced, upwardly extending hollow interior columns
11 disposed within the wall structure, the columns including downwardly extending
12 transverse recesses substantially aligned with the recesses of adjacent wall pylons
13 and downwardly extending longitudinal recesses extending along a longitudinal axis
14 of the tray, each transverse recess and each longitudinal recess associated with a
15 column support rib, wherein the interior columns have a height less than the height
16 of the pylons and less than the height of bottles loaded in the tray; and
17 a plurality of interior divider walls which join adjacent pylons and
18 columns to form, in combination with the base and the wall structure, a plurality of
19 bottle retaining pockets,
20 wherein when the tray is empty and is disposed in a stacked
21 configuration with a like upper tray, the pylon recesses of the tray are adapted to
22 receive the corresponding pylon ribs of the like upper tray and the column recesses
23 of the tray are adapted to receive the corresponding column ribs of the like upper
24 tray, such that at least a portion of the pylons and columns of the tray are received
25 in the pylons and columns, respectively, of the like upper tray.